

ABSTRACT:

In order to compress a video sequence under the constraint of scalability, the known 2D or 3D SPIHT, based on the prediction of the absence of significant information across scales of a wavelet decomposition, compares a set of pixels, corresponding to the same image area at different resolutions, to a value called level of significance. In both cases, the transform coefficients are ordered by means of magnitude tests involving the pixels represented by three ordered lists called list of insignificant sets (LIS), list of insignificant pixels (LIP) and list of significant pixels (LSP). In the original video sequence, the value of a pixel depends on those of the pixels surrounding it. The estimation of the probability of a symbol given the d previous bits becomes a difficult task when the number of conditioning events increases. The object of the invention is to propose an efficient video encoding method, reflecting the changes in the behavior of the information sources that contribute to the bitstream : for the estimation of the probabilities of occurrence of the symbols 0 and 1 in the lists at each level of significance, four models represented by four context-trees, are considered, these models corresponding to the LIS, LIP, LSP and a distinction is made between the models for the coefficients of luminance and those for the chrominance.